DERWENT-ACC-NO: 1977-40722Y

DERWENT-WEEK: 200300

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TITLE: Zeolite-type **isomerisation** catalyst
regeneration - in

                        which catalyst of e.g. iron on zeolite is
heated while

                        supplying hydrogen

PATENT-ASSIGNEE: IDEMITSU KOSAN CO LTD[IDEK]

PRIORITY-DATA: 1975JP-0128883 (October 28, 1975)

PATENT-FAMILY:
PUB-NO   PUB-DATE   LANGUAGE
PAGES   MAIN-IPC
JP 52052888 A   April 28, 1977   N/A
000   N/A
JP 79044000 B   December 22, 1979   N/A
000   N/A

INT-CL (IPC): B01J029/38, C07C005/22 , C07C009/00 , C07C013/54

ABSTRACTED-PUB-NO: JP 52052888A

BASIC-ABSTRACT:

Zeolite catalyst used for **isomerisation** of hydrocarbon is regenerated by
heating in presence of H2. The catalyst is formed by supporting metal having
hydrogenative activity, such as Fe, Co, Ni, Ru, etc., on zeolite.
Isomerisation of hydrocarbon is e.g. the formation of isopentane from
n-pentane, the formation of adamantanes from tricyclic satd.
hydrocarbons, etc.
The generation is carried out by heating the catalyst of lowered activity to
180-500 degrees C while supplying H2 of >10 kg/cm2.

The activity of zeolite-metal catalyst can be completely recovered by easy
operation. In an example, zeolite catalyst contg. Pt 0.75 wt.%, Re 0.25 wt.%
and Co 3 wt.% used for formation of adamantane from
trimethylenenorbornane

(TMN) was heated for 3-5 hr. at ca. 220 degrees C with flowing H2 (400
cc/min.), recovering completely the catalytic activity. The regeneration can
be carried out either by stopping the supply TMN or by flowing TMN (10cc/hr)
together with H2.

TITLE-TERMS: ZEOLITE TYPE ISOMER CATALYST REGENERATE CATALYST IRON ZEOLITE HEAT
                 SUPPLY HYDROGEN

DERWENT-CLASS: E33 J04

CPI-CODES: E09-D01; E10-J02D; J04-E05; N02; N06-E;

CHEMICAL-CODES:
Chemical Indexing M3 *01*
    Fragmentation Code
    M210 M213 M214 M215 M216 M220 M221 M222 M223 M224
    M225 M226 M232 M313 M314 M315 M316 M320 M610 M620
    N171 N172 N310 N111 N112 N113 N114 M510 M520 M530
    M540 M720 M416 M902

Chemical Indexing M3 *02*
    Fragmentation Code
    M320 M280 M610 G740 N171 N172 N310 N111 N112 N113
    N114 M510 M520 M530 M541 M720 M415 M902

Chemical Indexing M3 *03*
    Fragmentation Code
    G000 G003 G031 G032 G033 G034 G035 G036 G037 G038
    G039 G060 G740 M280 M320 M415 M510 M520 M530 M541
    M610 M720 M903 N111 N112 N113 N114 N171 N172 N310